

**Falcon Refinery Superfund Site  
Ingleside  
San Patricio County, Texas  
TXD 086 278 058**

**Monthly Progress Report # 61**

**May 2011**

**Prepared for**

**National Oil and Recovery Corporation  
3717 Bowne Street  
Flushing, NY 11354**

**Prepared by**



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**June 9, 2011**

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## **1.0 INTRODUCTION**

This sixty-first Monthly Progress Report is submitted in accordance with the Falcon Refinery Site Administrative Orders on Consent for Removal Action and Remedial Investigation / Feasibility Study between the U.S. Environmental Protection Agency (U.S. EPA) and National Oil Recovery Corporation (NORCO).

This Monthly Progress Report and subsequent reports will address activities associated with both of the orders.

The next monthly progress report, covering June, 2011 will be submitted on or before July 10, 2011.

## **2.0 COMPLETED ACTIVITIES**

### **2.1 Removal Action Activities**

During May the volume of liquid waste was measured in each of the above ground storage tanks (Figure 1) and samples were obtained to characterize the waste. Provided as Table 5 are the results of the tank gauging, which shows that a majority of the liquid waste is currently in Tanks 26 and 30. During June of 2009 measurements indicated that liquid waste had been removed from the tanks, as a result the current liquid is comprised of rainwater that fell into the tanks since June 2009 and came in contact with varying amounts of sludge that remained in the tanks.

Each of the liquid samples from the tanks was analyzed for volatile organic compounds (VOC), semi-volatile compounds (SVOC), metals and pH (Appendix A). Results of the sampling indicated that the rainwater that fell into the tanks is impacted minimally by the sludge that remained in the tanks. As an example, the analytical results from Tank 27, which contains approximately 210,193 gallons of liquid, met all TCEQ Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCL) for residential drinking water standards.

Provided as Table 6 is a compilation of all the analytical results, from the May sampling, that exceeded the respective PCLs for residential drinking water.

To date a total of approximately 7,774,721 gallons of hazardous waste have been removed from all of the above ground tanks and disposed via deep well injection at Texas Molecular.

Prior to the beginning of liquid waste disposal in October 2004, the volume of waste in the above ground storage tanks was measured at 6,844,094 gallons. Apparently due to holes in the tops of the tanks the volume of waste has increased due to rainfall, since more waste has been disposed of than was originally measured.

A compilation of hazardous liquid waste disposal is included as Table 1.

### **2.2 Remedial Investigation / Feasibility Study (RI/FS)**

NORCO will implement the Phase II RI/FS Field Sampling Plan when approval is granted by the EPA.

### **3.0 CHANGES MADE IN THE PLANS DURING THE REPORTING PERIOD**

Removal Action Work Plan Addendum No. 3 (Appendix B), which deals primarily with the disposal of the remaining waste in the tanks, was submitted to the EPA.

### **4.0 COMMUNITY RELATIONS**

The EPA has developed a web site to display information about the Removal Action and RI/FS activities. Information can be found by going to [www.epaossc.net](http://www.epaossc.net) and selecting web sites, then Region 6 and then the Falcon Refinery Site.

### **5.0 CHANGES IN PERSONNEL DURING THE REPORTING PERIOD**

No changes were made during May.

### **6.0 LIST OF PROJECTED WORK FOR THE NEXT TWO MONTHS**

#### **6.1 Removal Action Work projected for the next two months includes:**

- Implement Removal Action Work Plan Addendum No.3;
- Pending EPA approval move all liquid into Tank 30;
- As tanks are emptied and cleaned, determine if the tanks will be repaired or removed;
- Continued site maintenance; and
- Apply for a land discharge permit through the TCEQ.

#### **6.2 RI/FS Work projected for the next two months includes:**

- Implementing the Phase II Field Sampling Plan.

### **7.0 LABORATORY / MONITORING DATA**

Analytical results from the sampling of the above ground tanks is provided in Appendix B.

## FIGURE





N



0 200 400  
Feet

## ABOVE GROUND STORAGE TANK MAP

FALCON REFINERY  
INGELSIDE, SAN PATRICIO COUNTY, TEXAS

PROJECT NO.: 182978

DATE: 4/29/2011



505 EAST HUNTLAND DRIVE  
SUITE 250  
AUSTIN, TEXAS 78752  
512-329-6080

FIGURE  
1

Source: National Agriculture Imagery Program  
(NAIP) 2009 Aerial Photography.

## **TABLES**

**Table 1. Hazardous Liquid Waste Disposal**

DISPOSAL FACILITY	ADDRESS	PHONE NO.	EPA ID NO.	CONTACT
Texas Molecular Corpus Christi Services, LP	6901 Greenwood Dr. Corpus Christi, TX	361-852-8284	TXR000001016	Robert Rodriguez
<b>RQ, HAZARDOUS WASTE LIQUID N.O.S., 9 , UN3082, III (D007, D008, D018)</b>				
	<b>Month</b>	<b>Volume (gal)</b>		
	October-04	53,832		
	November-04	734,763		
	December-04	879,158		
	January-05	783,881		
	February-05	551,444		
	March-05	565,489		
	April-05	445,107		
	May-05	471,311		
	December-05	42,550		
	January-06	58,740		
	February-06	59,140		
	March-06	0		
	April-06	29,371		
	May-06	59,018		
	June-06	97,151		
	July-06	118,743		
	August-06	148,509		
	September-06	109,908		
	October-06	86,665		
	November-06	140,498		
	December-06	85,813		
	January-07	118,541		
	February-07	107,985		
	March-07	152,493		
	April-07	121,588		
	May-07	150,368		
	June-07	87,900		
	July-07	143,485		
	August-07	94,727		
	September-07	0		
	October-07	50,298		
	November-07	151,227		
	December-07	112,285		
	January-08	119,353		
	February-08	88,777		
	March-08	60,913		
	April-08	18,695		
	May-08	25,349		
	June-08	0		





**Table 3. Contaminated Soil and Oily Debris Disposal**

DISPOSAL FACILITY	ADDRESS	PHONE NO.	EPA ID NO.	CONTACT
U.S. Ecology Texas L.P.	P.O. Box 307 Robstown, TX	361-387-3518	TXD069452340	Glenda Felkner
<b>PETROLEUM CONTAMINATED SOIL AND OILY DEBRIS</b>				
	<b>Month</b>	<b>Volume (cy)</b>		
	October-04	0		
	November-04	0		
	December-04	40		
	January-05	0		
	February-05	0		
	<b>Total</b>	<b>40</b>		
<b>RQ, HAZARDOUS WASTE SOLID, N.O.S., LEAD, 9 NA3077, PGIII (OILY SLUDGE AND SOIL)</b>				
	<b>Month</b>	<b>Volume (cy)</b>		
	February-05	15		
	<b>Total</b>	<b>15</b>		

**Table 4. Oil and Filter Disposal**

DISPOSAL FACILITY	ADDRESS	PHONE NO.	EPA ID NO.	CONTACT
Texas Molecular Corpus Christi Services, LP	6901 Greenwood Dr Corpus Christi, TX	361-852-8284	TXR000001016	Robert Rodriguez
<b>RECYLCED OIL AND FILTERS</b>				
	<b>Month</b>	<b>Volume (gal)</b>		
	January-05	403		
	February-05	0		
	<b>Total</b>	<b>403</b>		
DISPOSAL FACILITY	ADDRESS	PHONE NO.	EPA ID NO.	CONTACT
Midstate Environmental Services, LLC	2203 Tower Road Robstown, TX	361-387-2171	TXR000051227	Lloyd Cooke
<b>RECYLCED OIL AND FILTERS</b>				
	<b>Month</b>	<b>Volume (gal)</b>		
	January-05	16,651		
	February-05	0		
	<b>Total</b>	<b>16,651</b>		

**Table 5. Falcon Refinery Tank Gauging**

<b><u>Tank ID</u></b>	<b><u>Radius (ft)</u></b>	<b><u>Fluid Height (ft)</u></b>	<b><u>Tank Height (ft)</u></b>	<b><u>Estimated Gallons of Liquid</u></b>
<b>27</b>	53.89	3.08	40	210,193
<b>26</b>	53.89	7.41	40	505,692
<b>10</b>	N/A	not measured	40	unknown
<b>2</b>	25	7.25	24	106,480
<b>7</b>	23.66	7.5	32	98,660
<b>30</b>	85	3.5	N/A	594,234
<b>24</b>	16.66	1	32	6,522
<b>20</b>	16.66	32.16	32	209,758
<b>22</b>	16.66	0	32	0
<b>23</b>	16.66	0.29	32	1,891
<b>19</b>	16.66	0	32	0
<b>18</b>	16.66	0.375	32	2,446
<b>21</b>	16.66	4.5	32	29,350
<b>Y1</b>	9.5	6	10.25	12,725
<b>17</b>	16.66	1	32	6,522
<b>n2</b>	6	5	15.41	4,230
<b>n1</b>	6	15	15.41	12,690
<b>X1</b>	9	2	21	3,807
<b>X2</b>	9	2	21	3,807
<b>X3</b>	7	2	16	2,303
<b>Total Gallons</b>				<b>1,801,393.52</b>

Table 6. Falcon Refinery May 2011 Analytical Results

Groundwater Analytical Results Falcon Refinery Superfund Site Ingleside, San Patricio County, Texas		Sample ID	TANK 26	TANK 10	TANK 30	TANK 7	TANK 20	TANK 2	TANK 27
		Laboratory	TestAmer	TestAmer	TestAmer	TestAmer	AnalSys	AnalSys	AnalSys
		Date Collected	5/20/2011	5/20/2011	5/20/2011	5/20/2011	5/10/2011	5/10/2011	5/10/2011
Analyte	TRRP Tier 1 PCL <sup>1</sup>	Residential Source Area, Class 1	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
VOCs (8260)	CAS	GW/GW <sub>Ing</sub>							
1,3,5-Trimethylbenzene	108-67-8	1.222098214	0.012	0.0012	0.068	0.021	LR	LR	LR
1,2,4-Trimethylbenzene	95-63-6	1.222098214	0.044	0.0013	0.19	0.081	LR	LR	LR
2-Butanone	78-93-3	15	LR	LR	LR	LR	0.0854	LR	LR
4-Methyl-2-pentanone	108-10-1	1.955357143	LR	LR	LR	LR	0.00621	LR	LR
Acetone	67-64-1	21.99776786	LR	0.015	LR	LR	0.624	LR	LR
Benzene	71-43-2	0.00500	0.32000	0.00730	2.50000	0.24000	0.00778	0.19900	LR
Ethylbenzene	100-41-4	0.70000	0.13000	0.00120	0.29000	0.17000	0.00333	0.16600	LR
Methyl tert-butyl ether	1634-04-4	0.24442	0.78000	0.00170	LR	1.50000	0.13300	0.29000	0.00843
Naphthalene	91-20-3	0.48884	0.21000	LR	0.18000	0.37000	LR	0.01430	LR
o-Xylene	95-47-6	10.00000	LR	LR	LR	LR	0.00159	0.03050	LR
Styrene	100-42-5	0.10000	LR	LR	LR	LR	0.00229	LR	LR
Toluene	108-88-3	1.00000	0.05000	0.00070	LR	0.51000	0.00279	0.02630	LR
Xylenes	1330-20-7	10.00000	0.25000	0.00440	1.40000	0.53000	0.00241	0.43200	LR
SVOCs (8270)	CAS	GW/GW <sub>Ing</sub>							
2,4-Dimethylphenol	105-67-9	0.48884	LR	LR	0.11000	0.06600	LR	0.02060	LR
1-Methylnaphthalene	90-12-0	0.03147	LR	LR	LR	LR	LR	0.01090	LR
2-Methylnaphthalene	91-57-6	0.09777	LR	LR	0.20000	0.22000	LR	LR	LR
2-Methylphenol	95-48-7	1.22210	LR	LR	LR	LR	0.13800	LR	LR
4-Methylphenol	106-44-5	0.12221	LR	LR	LR	LR	0.16500	LR	LR
Bis(2-ethylhexyl)phthalate	117-81-7	0.00600	LR	LR	LR	0.08900	LR	LR	LR
Chrysene	218-01-9	0.12500	LR	LR	LR	LR	0.01720	LR	LR
Phenanthrene	85-01-8	0.73326	LR	LR	LR	0.17000	0.01470	LR	LR
Phenol	108-95-2	7.33259	LR	LR	LR	LR	0.50900	LR	LR
Pyrene	129-00-0	0.73326	LR	LR	LR	LR	0.01870	LR	LR
Metals (6010/7470)	CAS	GW/GW <sub>Ing</sub>							
Arsenic	7440-38-2	0.01000	LR	LR	LR	LR	0.01190	0.00338	LR
Barium	7440-39-3	2.00000	0.75000	0.18000	3.60000	0.88000	0.00540	0.47400	0.20900
Cadmium	7440-43-9	0.00500	LR	LR	LR	LR	0.00207	LR	LR
Chromium (total)	7440-47-3	0.10000	LR	LR	LR	0.01600	LR	0.00491	LR
Lead	7439-92-1	0.01500	0.02200	0.02800	LR	0.12000	0.05360	0.02520	LR
Mercury	7439-97-6	0.00200	LR	LR	LR	LR	0.00108	LR	LR
Miscellaneous									
pH	--	NL	LR	LR	LR	LR	13.00000	LR	LR
Notes:									
<sup>1</sup> 30 TAC 350.51									
<sup>2</sup> Texas Secondary Drinking Water Standard									
NL - Not Limit (no PCL)									
LR - Less than reporting limit (RL)									
Data Qualifiers:									
Concentration exceeding Critical PCL.									

# APPENDIX A

Client: Gainco, Inc.  
Attn: Paul Supak  
Address:

Phone: FAX:

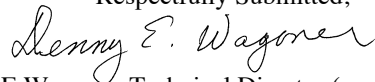
Report#/Lab ID#: 352492 Report Date: 05/16/11  
Project ID: Falcon Refinery  
Sample Name: Tank 20  
Sample Matrix: water  
Date Received: 05/10/2011 Time: 16:11  
Date Sampled: 05/10/2011 Time: 10:30

# REPORT OF ANALYSIS

# QUALITY ASSURANCE DATA <sup>1</sup>

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
A/BN extraction-625/8270	---	---	---	---	05/13/11	3510	---	---	---	---	---
Metals Dig.-Hg	---	---	---	---	05/11/11	7470 & SM3112B	---	---	---	---	---
Metals Dig.-Total	---	---	---	---	05/12/11	200.2 & 3005A	---	---	---	---	---
pH (@T=21.9°C)	13	pH units	---	---	05/11/11	9040C&SM4500HB	---	0	-NA-	100	-NA-
Arsenic/ICPMS	0.0119	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	0	99.5	98.3	99.6
Barium/ICPMS	0.0054	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	1	104.9	106.6	100
Cadmium/ICPMS	0.00207	mg/L	0.001	<0.001	05/13/11	6020A & 200.8	---	0.8	93.9	100.5	92.7
Chromium/ICPMS	<0.002	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	J,	1.5	99.5	98.5	100
Lead/ICPMS	0.0536	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	0.1	87	95.6	92.2
Mercury/CVAA	0.00108	mg/L	0.0002	<0.0002	05/12/11	7470&SM3112B	---	3.08	90	107	107
Selenium/ICPMS	<0.002	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	J,	1.7	106.2	104	106.9
Silver/ICPMS	<0.001	mg/L	0.001	<0.001	05/13/11	6020A & 200.8	---	1	92.7	97.6	92.2
Volatile organics-8260	---	---	---	---	05/13/11	8260b(5030/5035)	---	---	---	---	---
1,1-Dichloroethane	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.8	138	128.1	125.9
1,1-Dichloroethene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.4	106.7	98.3	99.2
1,1,1-Trichloroethane	<1	µg/L	1	<1	05/13/11	8260b & 624	L,S1,	2.4	139.6	126.9	125.6
1,1,1,2-Tetrachloroethane	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.1	105.6	101.5	103.4
1,1,2-Trichloroethane	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.7	121.4	119.4	120.5
1,1,2,2-Tetrachloroethane	<1	µg/L	1	<1	05/13/11	8260b & 624	C,	0.5	126.9	136.6	129.9
1,2-Dibromo-3-chloropropane	<2	µg/L	2	<2	05/13/11	8260b & 624	---	3.8	107	105.4	106.1
1,2-Dibromoethane (Ethylene dibromide)	<1	µg/L	1	<1	05/13/11	8260b & 624	---	3.8	115.2	114.1	112.5

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results reflect only the sample identified above. The results have been carefully reviewed and to the best of my knowledge, unless otherwise indicated, meet NELAC requirements as described by AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,  
  
D.E. Wagoner, Technical Director (or designee)

1. Quality assurance data for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent difference between duplicate results. 3. Recovery (Recov.) is the percent of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent recovery of analyte. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte detected between the RQL and the MDL. B = Analyte detected in associated method blank (s). C = poor CCV recovery. L = poor LCS recovery. S & S1 = MS and/or MSD recovery exceed advisory limits. S2 = Post digestion spike (PDS) recovery exceeds advisory limit. S3 = MS and/or MSD and PDS recoveries exceed advisory limits. P = Precision higher than advisory limit. M = Matrix interference. N = not NELAC certified. N1 = subcontract result enquire concerning NELAC certification. Solid sample results for all metals, except Mercury, reported on a dry weight basis (DWB)s. All other results for solid samples reported on an as received basis unless specifically identified as DWB.



**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 20

**Report#/Lab ID#:** 352492  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**
**QUALITY ASSURANCE DATA <sup>1</sup>**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
1,2-Dichlorobenzene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.4	111.8	110.8	112.7
1,2-Dichloroethane	<1	µg/L	1	<1	05/13/11	8260b & 624	---	1.5	100.6	93.6	91.9
1,2-Dichloropropane	<1	µg/L	1	<1	05/13/11	8260b & 624	C,	1.7	135.5	128.3	122.9
1,3-Dichlorobenzene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	0.2	111.2	109.2	111.6
1,4-Dichlorobenzene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	0.8	110.2	108.1	108.7
1,4-Dioxane	<20	µg/L	20	<20	05/13/11	8260b & 624	---	1.9	118.4	116.9	110.4
2-Butanone (MEK)	85.4	µg/L	20	<20	05/13/11	8260b & 624	---	6.9	130.2	130	122.4
2-Chloroethyl vinyl ether	<1	µg/L	1	<1	05/13/11	8260b & 624	---	4.5	76.6	91.1	95.4
2-Hexanone	<2	µg/L	2	<2	05/13/11	8260b & 624	---	1.7	114.7	115.7	114.6
4-Methyl-2-pentanone (MIBK)	6.21	µg/L	2	<2	05/13/11	8260b & 624	---	0.4	125.4	123.8	118.7
Acetone (2-Propanone)	624	µg/L	10	<10	05/13/11	8260b & 624	---	1.9	101.8	97.1	94.9
Acetonitrile	<20	µg/L	20	<20	05/13/11	8260b & 624	---	0.2	126	123	119.1
Acrolein	<10	µg/L	10	<10	05/13/11	8260b & 624	---	1	88.5	112.6	100.7
Acrylonitrile	<10	µg/L	10	<10	05/13/11	8260b & 624	C,	0.2	141.6	140.2	131.3
Benzene	7.78	µg/L	1	<1	05/13/11	8260b & 624	---	1.8	130.2	122.1	116.9
Bromobenzene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	0	121.1	118.6	120
Bromodichloromethane	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.1	108.7	101.4	101.8
Bromoform (Tribromomethane)	<1	µg/L	1	<1	05/13/11	8260b & 624	---	4	93.6	94	93.2
Bromomethane (Methyl bromide)	<2	µg/L	2	<2	05/13/11	8260b & 624	---	10	57.9	60.8	76
Carbon disulfide	<2	µg/L	2	<2	05/13/11	8260b & 624	---	12.7	127.5	106	112.5
Carbon tetrachloride	<1	µg/L	1	<1	05/13/11	8260b & 624	---	5.5	93.4	86.3	87.2
Chlorobenzene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.9	114.4	110.1	111
Chloroethane	<2	µg/L	2	<2	05/13/11	8260b & 624	---	3.8	103.9	97.9	90.4
Chloroform (Trichloromethane)	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.5	122	114.1	113.7
Chloromethane (Methyl chloride)	<2	µg/L	2	<2	05/13/11	8260b & 624	J,	5	92	85.7	89.9
cis-1,2-Dichloroethene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	1.7	131.5	121.4	118.1
cis-1,3-Dichloropropene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	0.8	101.1	112.1	106.9
Dibromochloromethane	<1	µg/L	1	<1	05/13/11	8260b & 624	---	0.9	106.3	104	104.3
Dibromomethane (Methylene bromide)	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.6	113.3	106	104.7
Dichlorodifluoromethane	<1	µg/L	1	<1	05/13/11	8260b & 624	---	1.1	45.8	44	44.2
Ethylbenzene	3.33	µg/L	1	<1	05/13/11	8260b & 624	---	3.6	117.2	114.2	113.2
Iodomethane (Methyl iodide)	<2	µg/L	2	<2	05/13/11	8260b & 624	---	1.9	57.8	60	68.9
m,p-Xylenes	2.41	µg/L	2	<2	05/13/11	8260b & 624	---	2.7	117.1	111.6	109.6
Methylene chloride (Dichloromethane)	<2	µg/L	2	<2	05/13/11	8260b & 624	J,	16.5	131.7	112.6	112.2

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 20

**Report#/Lab ID#:** 352492  
**Sample Matrix:** water

# REPORT OF ANALYSIS-cont.

# QUALITY ASSURANCE DATA <sup>1</sup>

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
MTBE	133	µg/L	10	<10	05/13/11	8260b & 624	---	2.6	127	119.3	111.2
o-Xylene	1.59	µg/L	1	<1	05/13/11	8260b & 624	---	1.5	118.4	111.5	113.3
Styrene	2.29	µg/L	1	<1	05/13/11	8260b & 624	---	1.2	119.4	113.9	113.3
Tetrachloroethene (Perchloroethylene)	<1	µg/L	1	<1	05/13/11	8260b & 624	---	4.5	104.4	100.8	100.4
Toluene	2.79	µg/L	1	<1	05/13/11	8260b & 624	---	3.5	122.3	115.7	112.7
trans-1,2-Dichloroethene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2.4	129.2	119.7	127.3
trans-1,3-Dichloropropene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	2	102.6	108.6	112.3
Trichloroethene	<1	µg/L	1	<1	05/13/11	8260b & 624	---	3.3	117.7	107.9	103.5
Trichlorofluoromethane	<1	µg/L	1	<1	05/13/11	8260b & 624	---	4.5	96.1	86.5	92.6
Vinyl acetate	<2	µg/L	2	<2	05/13/11	8260b & 624	---	2.2	112.2	127.4	125
Vinyl chloride	<1	µg/L	1	<1	05/13/11	8260b & 624	---	5.3	86.8	80.4	83.2
Extractable organics-625/8270	---	---	---	---	05/14/11	8270c & 625	---	---	---	---	---
1-Methylnaphthalene	<10	µg/L	10	<10	05/14/11	8270c & 625	N,	8	28.8	88.1	45.2
1,2-Diphenylhydrazine	<10	µg/L	10	<10	05/14/11	8270c & 625	---	15.7	55.8	92.5	78.6
1,2,4-Trichlorobenzene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	3.3	21.6	90	37.6
2-Chloronaphthalene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	9	29.1	95.2	46.2
2-Chlorophenol	<10	µg/L	10	<10	05/14/11	8270c & 625	---	7.8	40.2	93.2	57.1
2-Methylnaphthalene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	9.8	27.9	90.4	43.3
2-Methylphenol (o-Cresol)	138	µg/L	100	<100	05/14/11	8270c & 625	---	22.2	46.5	93.9	63.6
2-Nitroaniline	<50	µg/L	50	<50	05/14/11	8270c & 625	---	9.2	52.6	93.9	81.5
2-Nitrophenol	<10	µg/L	10	<10	05/14/11	8270c & 625	---	5.9	36.6	98	56.1
2,4-Dichlorophenol	<10	µg/L	10	<10	05/14/11	8270c & 625	---	6.5	41.4	95.9	65.9
2,4-Dimethylphenol	<10	µg/L	10	<10	05/14/11	8270c & 625	---	3.8	48.3	86.8	78.3
2,4-Dinitrophenol	<10	µg/L	10	<10	05/14/11	8270c & 625	---	18.1	19.8	98.7	34.6
2,4-Dinitrotoluene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	13.3	52.2	102.9	77.7
2,4,6-Trichlorophenol	<10	µg/L	10	<10	05/14/11	8270c & 625	---	10.4	39.4	96.4	56
2,6-Dichlorophenol	<10	µg/L	10	<10	05/14/11	8270c & 625	---	3.3	36.6	92.3	52.6
2,6-Dinitrotoluene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	16.2	55.8	97.8	82.3
3-Nitroaniline	<50	µg/L	50	<50	05/14/11	8270c & 625	---	8.7	50.9	102	82.9
3,3'-Dichlorobenzidine	<20	µg/L	20	<20	05/14/11	8270c & 625	---	13.3	56.2	96.6	86.9
3&4 Methylphenol (m&p-Cresol)	165	µg/L	20	<20	05/14/11	8270c & 625	---	15.8	40.8	96	59.6
4-Bromophenyl phenyl ether	<10	µg/L	10	<10	05/14/11	8270c & 625	---	19.5	52.4	95.6	70.8
4-Chloro-3-methylphenol	<20	µg/L	20	<20	05/14/11	8270c & 625	---	4.1	51.6	92.8	73.9

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 20

**Report#/Lab ID#:** 352492  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**
**QUALITY ASSURANCE DATA <sup>1</sup>**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
4-Chloroaniline (p-Chloroaniline)	<20	µg/L	20	<20	05/14/11	8270c & 625	---	15.7	36.3	106.7	77.6
4-Chlorophenyl phenyl ether	<10	µg/L	10	<10	05/14/11	8270c & 625	---	13.2	45.8	96.5	66.6
4-Nitroaniline	<20	µg/L	20	<20	05/14/11	8270c & 625	---	6.7	44.8	97.5	73.3
4-Nitrophenol	<50	µg/L	50	<50	05/14/11	8270c & 625	---	7.2	12.6	83	16.2
4,6-Dinitro-2-methylphenol	<25	µg/L	25	<25	05/14/11	8270c & 625	---	19.5	35.5	101.9	50.3
7,12-Dimethylbenz[a]anthracene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	14.5	56.9	99.4	84.4
Acenaphthene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	12.8	40.6	94.3	58.1
Acenaphthylene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	8.4	40.9	96.1	61.8
Aniline	<10	µg/L	10	<10	05/14/11	8270c & 625	---	15.2	47.1	92.1	59
Anthracene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	16.1	58.8	93.4	82.7
Benzidine	<40	µg/L	40	<40	05/14/11	8270c & 625	---	14.9	54.8	85.5	93.8
Benzo[a]anthracene	<10	µg/L	10	<10	05/14/11	8270c & 625	J,	11	56.4	93.7	84.6
Benzo[a]pyrene	<10	µg/L	10	<10	05/14/11	8270c & 625	J,	10.9	57.9	97	86
Benzo[b]fluoranthene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	13.2	55	97.6	81.8
Benzo[g,h,i]perylene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	12.2	64.6	90.3	101.1
Benzo[j,k]fluoranthene	<10	µg/L	10	<10	05/14/11	8270c & 625	J,	13.9	56.2	94.7	83.4
Benzoic acid	<40	µg/L	40	<40	05/14/11	8270c & 625	---	26.7	1.9	88.3	4
Benzyl alcohol	<20	µg/L	20	<20	05/14/11	8270c & 625	---	19.9	38	96.5	71.7
bis(2-Chloroethoxy)methane	<10	µg/L	10	<10	05/14/11	8270c & 625	---	5	49.2	90.9	80.7
bis(2-Chloroethyl)ether	<10	µg/L	10	<10	05/14/11	8270c & 625	---	6.5	44.7	93.2	66.3
bis(2-chloroisopropyl)ether	<10	µg/L	10	<10	05/14/11	8270c & 625	---	9.8	40.2	90.9	61.4
bis(2-Ethylhexyl)phthalate	<10	µg/L	10	<10	05/14/11	8270c & 625	---	14.1	53.2	98.3	83.1
Butyl benzyl phthalate	<10	µg/L	10	<10	05/14/11	8270c & 625	---	6.9	50.9	95.3	83.8
Chrysene	17.2	µg/L	10	<10	05/14/11	8270c & 625	---	9.5	55.6	91.8	86.1
Di-n-butyl phthalate (Dibutylphthalate)	<10	µg/L	10	<10	05/14/11	8270c & 625	---	15.5	54.3	91	80.4
Di-n-octylphthalate (Dioctylphthalate)	<10	µg/L	10	<10	05/14/11	8270c & 625	---	11.9	52.7	101.8	82.1
Dibenz[a,h]acridine	<10	µg/L	10	<10	05/14/11	8270c & 625	---	16.6	59.1	93.3	89.1
Dibenz[a,h]anthracene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	13.3	64.2	90.5	95.7
Dibenzofuran	<10	µg/L	10	<10	05/14/11	8270c & 625	---	13	44.2	96	65.2
Diethylphthalate	<10	µg/L	10	<10	05/14/11	8270c & 625	---	15	53.6	96.9	75.5
Dimethylphthalate	<10	µg/L	10	<10	05/14/11	8270c & 625	---	9.2	53	94.9	77.6
Fluoranthene	<10	µg/L	10	<10	05/14/11	8270c & 625	J,	11.8	57.5	95.1	84.3
Fluorene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	9.2	49.9	97.1	72.3
Hexachlorobenzene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	12.4	55.9	93.6	75.6

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 20

**Report#/Lab ID#:** 352492  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**
**QUALITY ASSURANCE DATA <sup>1</sup>**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Hexachlorobutadiene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	1.9	19.5	93	31.8
Hexachlorocyclopentadiene (HCCPD)	<10	µg/L	10	<10	05/14/11	8270c & 625	S1,M,	0	0	102.8	14.8
Hexachloroethane	<10	µg/L	10	<10	05/14/11	8270c & 625	---	2.9	19.7	94.8	31.4
Indene	<10	µg/L	10	<10	05/14/11	8270c & 625	N,	11.5	34.2	93.3	50.2
Indeno[1,2,3-cd]pyrene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	16.1	61	92.2	89.4
Isophorone	<10	µg/L	10	<10	05/14/11	8270c & 625	---	6.7	57.6	90.4	95.3
Methylchrysene	<10	µg/L	10	<10	05/14/11	8270c & 625	J,N,	10.2	46.9	91.9	69.2
N-Nitrosodi-n-propylamine	<10	µg/L	10	<10	05/14/11	8270c & 625	---	4.4	43.1	88.7	71.9
N-Nitrosodimethylamine	<10	µg/L	10	<10	05/14/11	8270c & 625	---	5.9	31	94.3	41.5
N-Nitrosodiphenylamine	<10	µg/L	10	<10	05/14/11	8270c & 625	---	14.4	59.5	91.7	85.4
Naphthalene	<10	µg/L	10	<10	05/14/11	8270c & 625	J,	5.5	31.7	90.7	49.8
Nitrobenzene	<10	µg/L	10	<10	05/14/11	8270c & 625	---	1.6	44.1	91.2	72.3
Pentachlorophenol	<10	µg/L	10	<10	05/14/11	8270c & 625	---	9.5	33.2	101.3	54.8
Phenanthrene	14.7	µg/L	10	<10	05/14/11	8270c & 625	---	12.2	59.8	92.6	86
Phenol	509	µg/L	100	<100	05/14/11	8270c & 625	---	15.4	17.9	93.1	25
Pyrene	18.7	µg/L	10	<10	05/14/11	8270c & 625	---	11.1	58.7	95.5	85.8
Pyridine	<10	µg/L	10	<10	05/14/11	8270c & 625	---	19.5	26.1	94.6	34.1
Quinoline	<10	µg/L	10	<10	05/14/11	8270c & 625	---	9.8	51.2	91.8	79.4

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 20

**Report#/Lab ID#:** 352492  
**Sample Matrix:** water

# REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyzed	Data Qualifiers
1,2-Dichloroethane-d4	8260b & 624	85.4	70-125	05/13/11	---
1,2-Dichloroethane-d4	8260b & 624	81.5	70-125	05/13/11	---
4-Bromofluorobenzene	8260b & 624	100.6	80-115	05/13/11	---
4-Bromofluorobenzene	8260b & 624	94.8	80-115	05/13/11	---
Toluene-d8	8260b & 624	103.9	78-115	05/13/11	---
Toluene-d8	8260b & 624	105.3	78-115	05/13/11	---
2-Fluorobiphenyl	8270c & 625	40	10-110	05/14/11	---
2-Fluorobiphenyl	8270c & 625	none/diluted	diluted @ 10X	05/14/11	D
2-Fluorophenol	8270c & 625	28.2	10-110	05/14/11	---
2-Fluorophenol	8270c & 625	none/diluted	diluted @ 10X	05/14/11	D
2,4,6-Tribromophenol	8270c & 625	51.2	10-120	05/14/11	---
2,4,6-Tribromophenol	8270c & 625	none/diluted	diluted @ 10X	05/14/11	D
Nitrobenzene-d5	8270c & 625	45.6	10-110	05/14/11	---
Nitrobenzene-d5	8270c & 625	none/diluted	diluted @ 10X	05/14/11	D
Phenol-d6	8270c & 625	23	10-110	05/14/11	---
Phenol-d6	8270c & 625	none/diluted	diluted @ 10X	05/14/11	D
Terphenyl-d14	8270c & 625	27.3	10-115	05/14/11	---
Terphenyl-d14	8270c & 625	none/diluted	diluted @ 10X	05/14/11	D

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**Exceptions Report (FINAL SECTION / END-OF-REPORT):****Report #/Lab ID#:** 352492 **Matrix:** water**Client:** Gainco, Inc.**Attn:** Paul Supak**Project ID:** Falcon Refinery**Sample Name:** Tank 20

Unless otherwise identified by data qualifier "N" or by an exception report, all reported results represent parameters and tests for which AnalySys maintains NELAC certification; or results provided by a subcontractor with NELAC certification for the test results provided.

**Sample Temperature/Condition:** ≤6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is ≤ 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

**Standard sample acceptability conditions met? : YES**

Sample received in appropriate container(s), at appropriate temperature and pH.

**J flag Discussion:**

A J-flag data qualifier indicates that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

**Comments pertaining to Data Qualifiers and QC data (where applicable):**

Parameter	Qualif.	Comments
Chromium/ICPMS	J	See J-flag discussion above.
Selenium/ICPMS	J	See J-flag discussion above.
1,1,1-Trichloroethane	L	Lab control sample (LCS or spiked blank). LCS recov-high (high bias). Sample result < MDL. No impact.
1,1,1-Trichloroethane	S	Spike (MS,MSD,PDS) recovery issue. MS, MSD & PDS recovery outside acceptance range. LCS fails or not available. Probable sample impact.
1,1,2,2-Tetrachloroethane	C	Cont. Calib. Verification (CCV). CCV recov-high (high bias). Sample result < MDL. No impact.
1,2-Dichloropropane	C	Cont. Calib. Verification (CCV). CCV recov-high (high bias). Sample result < MDL. No impact.
Acrylonitrile	C	Cont. Calib. Verification (CCV). CCV recov-high (high bias). Sample result < MDL. No impact.
Chloromethane (Methyl chloride)	J	See J-flag discussion above.
Methylene chloride (Dichloromethane)	J	See J-flag discussion above.
1-Methylnaphthalene	N	NELAC accreditation for this analyte not available from TCEQ. 30 TAC§25.6(4) applies.
Benzo[a]anthracene	J	See J-flag discussion above.
Benzo[a]pyrene	J	See J-flag discussion above.
Benzo[j,k]fluoranthene	J	See J-flag discussion above.
Fluoranthene	J	See J-flag discussion above.
Hexachlorocyclopentadiene (HCCPD)	S1	Spike (MS,MSD) recovery issue. MS & MSD recovery outside acceptance range. LCS recovery OK. Probable matrix interference.
Indene	N	NELAC accreditation for this analyte not available from TCEQ. 30 TAC§25.6(4) applies.
Methylchrysene	J	See J-flag discussion above.
Methylchrysene	N	NELAC accreditation for this analyte not available from TCEQ. 30 TAC§25.6(4) applies.
Naphthalene	J	See J-flag discussion above.



### Exceptions Report (FINAL SECTION / END-OF-REPORT):

**Report #/Lab ID#:** 352492 **Matrix:** water

**Client:** Gainco, Inc.

**Attn:** Paul Supak

**Project ID:** Falcon Refinery

**Sample Name:** Tank 20

Unless otherwise identified by data qualifier "N" or by an exception report, all reported results represent parameters and tests for which AnalySys maintains NELAC certification; or results provided by a subcontractor with NELAC certification for the test results provided.



2-Fluorobiphenyl	D	Surrogate recoveries not accurately quantifiable.
2-Fluorophenol	D	Surrogate recoveries not accurately quantifiable.
2,4,6-Tribromophenol	D	Surrogate recoveries not accurately quantifiable.
Nitrobenzene-d5	D	Surrogate recoveries not accurately quantifiable.
Phenol-d6	D	Surrogate recoveries not accurately quantifiable.
Terphenyl-d14	D	Surrogate recoveries not accurately quantifiable.

**Client:** Gainco, Inc.  
**Attn:** Paul Supak  
**Address:**

**Phone:**                      **FAX:**

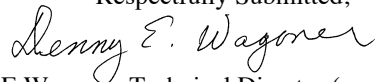
**Report#/Lab ID#:** 352493                      **Report Date:** 05/16/11  
**Project ID:** Falcon Refinery  
**Sample Name:** Tank 2  
**Sample Matrix:** water  
**Date Received:** 05/10/2011                      **Time:** 16:11  
**Date Sampled:** 05/10/2011                      **Time:** 11:15

## REPORT OF ANALYSIS

## QUALITY ASSURANCE DATA <sup>1</sup>

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
A/BN extraction-625/8270	---	---	---	---	05/13/11	3510	---	---	---	---	---
Metals Dig.-Hg	---	---	---	---	05/11/11	7470 & SM3112B	---	---	---	---	---
Metals Dig.-Total	---	---	---	---	05/11/11	200.2 & 3005A	---	---	---	---	---
Arsenic/ICPMS	0.00338	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	0	99.5	98.3	99.6
Barium/ICPMS	0.474	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	1	104.9	106.6	100
Cadmium/ICPMS	<0.001	mg/L	0.001	<0.001	05/13/11	6020A & 200.8	---	0.8	93.9	100.5	92.7
Chromium/ICPMS	0.00491	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	1.5	99.5	98.5	100
Lead/ICPMS	0.0252	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	0.1	87	95.6	92.2
Mercury/CVAA	<0.0002	mg/L	0.0002	<0.0002	05/12/11	7470&SM3112B	---	3.08	90	107	107
Selenium/ICPMS	<0.002	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	1.7	106.2	104	106.9
Silver/ICPMS	<0.001	mg/L	0.001	<0.001	05/13/11	6020A & 200.8	---	1	92.7	97.6	92.2
Volatile organics-8260	---	---	---	---	05/12/11	8260b(5030/5035)	---	---	---	---	---
1,1-Dichloroethane	<10	µg/L	10	<10	05/12/11	8260b & 624	---	5.9	136.5	119.2	121.3
1,1-Dichloroethene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	7.3	107.9	94.5	100.3
1,1,1-Trichloroethane	<10	µg/L	10	<10	05/12/11	8260b & 624	C,L,S,	8.2	143.9	127.9	125.8
1,1,1,2-Tetrachloroethane	<10	µg/L	10	<10	05/12/11	8260b & 624	---	1	107.3	101.8	102.7
1,1,2-Trichloroethane	<10	µg/L	10	<10	05/12/11	8260b & 624	---	2.2	124.7	116.1	114.5
1,1,2,2-Tetrachloroethane	<10	µg/L	10	<10	05/12/11	8260b & 624	---	1.6	129.1	128.8	122.8
1,2-Dibromo-3-chloropropane	<20	µg/L	20	<20	05/12/11	8260b & 624	---	2.6	112.3	104.9	106.1
1,2-Dibromoethane (Ethylene dibromide)	<10	µg/L	10	<10	05/12/11	8260b & 624	---	0.5	118.1	112	112.5
1,2-Dichlorobenzene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	1.2	111.4	110.8	110

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results reflect only the sample identified above. The results have been carefully reviewed and to the best of my knowledge, unless otherwise indicated, meet NELAC requirements as described by AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,  
  
D.E. Wagoner, Technical Director (or designee)

1. Quality assurance data for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent difference between duplicate results. 3. Recovery (Recov.) is the percent of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent recovery of analyte. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte detected between the RQL and the MDL. B = Analyte detected in associated method blank (s). C=poor CCV recovery. L=poor LCS recovery. S & S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference. N=not NELACcertified. N1=subcontract result enquire concerning NELAC certification. Solid sample results for all metals, except Mercury, reported on a dry weight basis (DWB)s. All other results for solid samples reported on an as received basis unless specifically identified as DWB.

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 2

**Report#/Lab ID#:** 352493  
**Sample Matrix:** water

# REPORT OF ANALYSIS-cont.

# QUALITY ASSURANCE DATA <sup>1</sup>

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
1,2-Dichloroethane	<10	µg/L	10	<10	05/12/11	8260b & 624	---	0.8	103.3	93.3	90.9
1,2-Dichloropropane	<10	µg/L	10	<10	05/12/11	8260b & 624	C,	2	132.1	120.6	117.1
1,3-Dichlorobenzene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	0.1	109.7	108.2	107.9
1,4-Dichlorobenzene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	1	108.5	106.9	105.3
1,4-Dioxane	<200	µg/L	200	<200	05/12/11	8260b & 624	---	2.5	119.4	105	118.4
2-Butanone (MEK)	<20	µg/L	20	<20	05/12/11	8260b & 624	---	2.6	137.8	115.3	128.2
2-Chloroethyl vinyl ether	<10	µg/L	10	<10	05/12/11	8260b & 624	---	16.2	108.9	93.4	100.4
2-Hexanone	<20	µg/L	20	<20	05/12/11	8260b & 624	---	0.6	115.7	111.4	111.7
4-Methyl-2-pentanone (MIBK)	<20	µg/L	20	<20	05/12/11	8260b & 624	---	0.8	129.4	114.8	119.6
Acetone (2-Propanone)	<100	µg/L	100	<100	05/12/11	8260b & 624	---	5.5	105.3	92.3	96
Acetonitrile	<200	µg/L	200	<200	05/12/11	8260b & 624	---	1.2	133.3	112.4	118.1
Acrolein	<100	µg/L	100	<100	05/12/11	8260b & 624	---	3.9	123	106.5	107.7
Acrylonitrile	<100	µg/L	100	<100	05/12/11	8260b & 624	---	0.4	139.8	122.9	123.3
Benzene	199	µg/L	10	<10	05/12/11	8260b & 624	---	4.5	126.1	114.9	111.1
Bromobenzene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	1	117.2	116	111.7
Bromodichloromethane	<10	µg/L	10	<10	05/12/11	8260b & 624	---	2	110.1	99.8	98.2
Bromoform (Tribromomethane)	<10	µg/L	10	<10	05/12/11	8260b & 624	---	0.9	100.9	95.4	95.4
Bromomethane (Methyl bromide)	<20	µg/L	20	<20	05/12/11	8260b & 624	---	4.7	91.6	80.7	86.8
Carbon disulfide	<20	µg/L	20	<20	05/12/11	8260b & 624	---	7.9	127.6	113.6	128.7
Carbon tetrachloride	<10	µg/L	10	<10	05/12/11	8260b & 624	---	5	97.6	89.7	89.7
Chlorobenzene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	1	113.7	107.7	108.4
Chloroethane	<20	µg/L	20	<20	05/12/11	8260b & 624	---	8.1	106.7	96.2	92.8
Chloroform (Trichloromethane)	<10	µg/L	10	<10	05/12/11	8260b & 624	---	2.2	120.9	107.8	110
Chloromethane (Methyl chloride)	<20	µg/L	20	<20	05/12/11	8260b & 624	---	7.3	102.7	92	94.3
cis-1,2-Dichloroethene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	2.6	130.4	116.9	113.9
cis-1,3-Dichloropropene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	0.8	117.6	108	104.8
Dibromochloromethane	<10	µg/L	10	<10	05/12/11	8260b & 624	---	2.7	107.5	104.3	103.9
Dibromomethane (Methylene bromide)	<10	µg/L	10	<10	05/12/11	8260b & 624	---	2.3	116.5	103.4	101.6
Dichlorodifluoromethane	<10	µg/L	10	<10	05/12/11	8260b & 624	---	11.8	52.2	48.2	45.7
Ethylbenzene	166	µg/L	10	<10	05/12/11	8260b & 624	---	1	114.6	109.3	109.2
Iodomethane (Methyl iodide)	<20	µg/L	20	<20	05/12/11	8260b & 624	---	4.8	86.2	76	84.2
m,p-Xylenes	432	µg/L	20	<20	05/12/11	8260b & 624	---	0.9	113	107.6	107.6
Methylene chloride (Dichloromethane)	<20	µg/L	20	<20	05/12/11	8260b & 624	J,	2.5	137.5	113.8	116.4
MTBE	290	µg/L	10	<10	05/12/11	8260b & 624	---	4.2	135.2	118.3	113.3

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 2

**Report#/Lab ID#:** 352493  
**Sample Matrix:** water

# REPORT OF ANALYSIS-cont.

# QUALITY ASSURANCE DATA <sup>1</sup>

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
o-Xylene	30.5	µg/L	10	<10	05/12/11	8260b & 624	---	0.7	114.6	107.5	109.5
Styrene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	1.2	116.1	111	110.4
Tetrachloroethene (Perchloroethylene)	<10	µg/L	10	<10	05/12/11	8260b & 624	---	4.1	105.6	99.4	100.1
Toluene	26.3	µg/L	10	<10	05/12/11	8260b & 624	---	3.7	120.5	108.7	107.4
trans-1,2-Dichloroethene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	5.3	127	113.8	123.9
trans-1,3-Dichloropropene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	1.7	112.2	108.7	112.2
Trichloroethene	<10	µg/L	10	<10	05/12/11	8260b & 624	---	3.1	111.7	104	100.4
Trichlorofluoromethane	<10	µg/L	10	<10	05/12/11	8260b & 624	---	7.1	99.7	87.2	93.3
Vinyl acetate	<20	µg/L	20	<20	05/12/11	8260b & 624	---	4.3	140.5	119.7	120.1
Vinyl chloride	<10	µg/L	10	<10	05/12/11	8260b & 624	---	11	95.8	85.9	84.6
Extractable organics-625/8270	---	---	---	---	05/13/11	8270c & 625	---	---	---	---	---
1-Methylnaphthalene	10.9	µg/L	10	<10	05/13/11	8270c & 625	N,	8	28.8	88.1	45.2
1,2-Diphenylhydrazine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	15.7	55.8	92.5	78.6
1,2,4-Trichlorobenzene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	3.3	21.6	90	37.6
2-Chloronaphthalene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9	29.1	95.2	46.2
2-Chlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	7.8	40.2	93.2	57.1
2-Methylnaphthalene	<10	µg/L	10	<10	05/13/11	8270c & 625	J,	9.8	27.9	90.4	43.3
2-Methylphenol (o-Cresol)	<10	µg/L	10	<10	05/13/11	8270c & 625	J,	22.2	46.5	93.9	63.6
2-Nitroaniline	<50	µg/L	50	<50	05/13/11	8270c & 625	---	9.2	52.6	93.9	81.5
2-Nitrophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	5.9	36.6	98	56.1
2,4-Dichlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	6.5	41.4	95.9	65.9
2,4-Dimethylphenol	20.6	µg/L	10	<10	05/13/11	8270c & 625	---	3.8	48.3	86.8	78.3
2,4-Dinitrophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	18.1	19.8	98.7	34.6
2,4-Dinitrotoluene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.3	52.2	102.9	77.7
2,4,6-Trichlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	10.4	39.4	96.4	56
2,6-Dichlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	3.3	36.6	92.3	52.6
2,6-Dinitrotoluene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	16.2	55.8	97.8	82.3
3-Nitroaniline	<50	µg/L	50	<50	05/13/11	8270c & 625	---	8.7	50.9	102	82.9
3,3'-Dichlorobenzidine	<20	µg/L	20	<20	05/13/11	8270c & 625	---	13.3	56.2	96.6	86.9
3&4 Methylphenol (m&p-Cresol)	<20	µg/L	20	<20	05/13/11	8270c & 625	---	15.8	40.8	96	59.6
4-Bromophenyl phenyl ether	<10	µg/L	10	<10	05/13/11	8270c & 625	---	19.5	52.4	95.6	70.8
4-Chloro-3-methylphenol	<20	µg/L	20	<20	05/13/11	8270c & 625	---	4.1	51.6	92.8	73.9
4-Chloroaniline (p-Chloroaniline)	<20	µg/L	20	<20	05/13/11	8270c & 625	---	15.7	36.3	106.7	77.6

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 2

**Report#/Lab ID#:** 352493  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**
**QUALITY ASSURANCE DATA <sup>1</sup>**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
4-Chlorophenyl phenyl ether	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.2	45.8	96.5	66.6
4-Nitroaniline	<20	µg/L	20	<20	05/13/11	8270c & 625	---	6.7	44.8	97.5	73.3
4-Nitrophenol	<50	µg/L	50	<50	05/13/11	8270c & 625	---	7.2	12.6	83	16.2
4,6-Dinitro-2-methylphenol	<25	µg/L	25	<25	05/13/11	8270c & 625	---	19.5	35.5	101.9	50.3
7,12-Dimethylbenz[a]anthracene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	14.5	56.9	99.4	84.4
Acenaphthene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	12.8	40.6	94.3	58.1
Acenaphthylene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	8.4	40.9	96.1	61.8
Aniline	<10	µg/L	10	<10	05/13/11	8270c & 625	---	15.2	47.1	92.1	59
Anthracene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	16.1	58.8	93.4	82.7
Benzidine	<40	µg/L	40	<40	05/13/11	8270c & 625	---	14.9	54.8	85.5	93.8
Benzo[a]anthracene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	11	56.4	93.7	84.6
Benzo[a]pyrene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	10.9	57.9	97	86
Benzo[b]fluoranthene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.2	55	97.6	81.8
Benzo[g,h,i]perylene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	12.2	64.6	90.3	101.1
Benzo[j,k]fluoranthene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.9	56.2	94.7	83.4
Benzoic acid	<40	µg/L	40	<40	05/13/11	8270c & 625	---	26.7	1.9	88.3	4
Benzyl alcohol	<20	µg/L	20	<20	05/13/11	8270c & 625	---	19.9	38	96.5	71.7
bis(2-Chloroethoxy)methane	<10	µg/L	10	<10	05/13/11	8270c & 625	---	5	49.2	90.9	80.7
bis(2-Chloroethyl)ether	<10	µg/L	10	<10	05/13/11	8270c & 625	---	6.5	44.7	93.2	66.3
bis(2-chloroisopropyl)ether	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.8	40.2	90.9	61.4
bis(2-Ethylhexyl)phthalate	<10	µg/L	10	<10	05/13/11	8270c & 625	---	14.1	53.2	98.3	83.1
Butyl benzyl phthalate	<10	µg/L	10	<10	05/13/11	8270c & 625	---	6.9	50.9	95.3	83.8
Chrysene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.5	55.6	91.8	86.1
Di-n-butyl phthalate (Dibutylphthalate)	<10	µg/L	10	<10	05/13/11	8270c & 625	---	15.5	54.3	91	80.4
Di-n-octylphthalate (Dioctylphthalate)	<10	µg/L	10	<10	05/13/11	8270c & 625	---	11.9	52.7	101.8	82.1
Dibenz[a,h]acridine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	16.6	59.1	93.3	89.1
Dibenz[a,h]anthracene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.3	64.2	90.5	95.7
Dibenzofuran	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13	44.2	96	65.2
Diethylphthalate	<10	µg/L	10	<10	05/13/11	8270c & 625	---	15	53.6	96.9	75.5
Dimethylphthalate	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.2	53	94.9	77.6
Fluoranthene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	11.8	57.5	95.1	84.3
Fluorene	<10	µg/L	10	<10	05/13/11	8270c & 625	J,	9.2	49.9	97.1	72.3
Hexachlorobenzene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	12.4	55.9	93.6	75.6
Hexachlorobutadiene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	1.9	19.5	93	31.8

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 2

**Report#/Lab ID#:** 352493  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**
**QUALITY ASSURANCE DATA <sup>1</sup>**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Hexachlorocyclopentadiene (HCCPD)	<10	µg/L	10	<10	05/13/11	8270c & 625	S1,M,	0	0	102.8	14.8
Hexachloroethane	<10	µg/L	10	<10	05/13/11	8270c & 625	---	2.9	19.7	94.8	31.4
Indene	<10	µg/L	10	<10	05/13/11	8270c & 625	J,N,	11.5	34.2	93.3	50.2
Indeno[1,2,3-cd]pyrene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	16.1	61	92.2	89.4
Isophorone	<10	µg/L	10	<10	05/13/11	8270c & 625	---	6.7	57.6	90.4	95.3
Methylchrysene	<10	µg/L	10	<10	05/13/11	8270c & 625	N,	10.2	46.9	91.9	69.2
N-Nitrosodi-n-propylamine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	4.4	43.1	88.7	71.9
N-Nitrosodimethylamine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	5.9	31	94.3	41.5
N-Nitrosodiphenylamine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	14.4	59.5	91.7	85.4
Naphthalene	14.3	µg/L	10	<10	05/13/11	8270c & 625	---	5.5	31.7	90.7	49.8
Nitrobenzene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	1.6	44.1	91.2	72.3
Pentachlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.5	33.2	101.3	54.8
Phenanthrene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	12.2	59.8	92.6	86
Phenol	<10	µg/L	10	<10	05/13/11	8270c & 625	J,	15.4	17.9	93.1	25
Pyrene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	11.1	58.7	95.5	85.8
Pyridine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	19.5	26.1	94.6	34.1
Quinoline	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.8	51.2	91.8	79.4



<b>Client:</b> Gainco, Inc.	<b>Project ID:</b> Falcon Refinery	<b>Report#/Lab ID#:</b> 352493
<b>Attn:</b> Paul Supak	<b>Sample Name:</b> Tank 2	<b>Sample Matrix:</b> water

# REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyzed	Data Qualifiers
1,2-Dichloroethane-d4	8260b & 624	85.6	70-125	05/12/11	---
4-Bromofluorobenzene	8260b & 624	96.7	80-115	05/12/11	---
Toluene-d8	8260b & 624	102.7	78-115	05/12/11	---
2-Fluorobiphenyl	8270c & 625	44.2	10-110	05/13/11	---
2-Fluorophenol	8270c & 625	26.6	10-110	05/13/11	---
2,4,6-Tribromophenol	8270c & 625	54	10-120	05/13/11	---
Nitrobenzene-d5	8270c & 625	42.4	10-110	05/13/11	---
Phenol-d6	8270c & 625	16.5	10-110	05/13/11	---
Terphenyl-d14	8270c & 625	27.7	10-115	05/13/11	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**Exceptions Report (FINAL SECTION / END-OF-REPORT):****Report #/Lab ID#:** 352493 **Matrix:** water**Client:** Gainco, Inc.**Attn:** Paul Supak**Project ID:** Falcon Refinery**Sample Name:** Tank 2

Unless otherwise identified by data qualifier "N" or by an exception report, all reported results represent parameters and tests for which AnalySys maintains NELAC certification; or results provided by a subcontractor with NELAC certification for the test results provided.

**Sample Temperature/Condition:** ≤6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is ≤ 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

**Standard sample acceptability conditions met? : YES**

Sample received in appropriate container(s), at appropriate temperature and pH.

**J flag Discussion:**

A J-flag data qualifier indicates that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

**Comments pertaining to Data Qualifiers and QC data (where applicable):**

Parameter	Qualif.	Comments
1,1,1-Trichloroethane	L	Lab control sample (LCS or spiked blank). LCS recov-high (high bias). Sample result < MDL. No impact.
1,1,1-Trichloroethane	C	Cont. Calib. Verification (CCV). CCV recov-high (high bias). Sample result < MDL. No impact.
1,1,1-Trichloroethane	S	Spike (MS,MSD,PDS) recovery issue. MS, MSD & PDS recovery outside acceptance range. LCS fails or not available. Probable sample impact.
1,2-Dichloropropane	C	Cont. Calib. Verification (CCV). CCV recov-high (high bias). Sample result < MDL. No impact.
Methylene chloride (Dichloromethane)	J	See J-flag discussion above.
1-Methylnaphthalene	N	NELAC accreditation for this analyte not available from TCEQ. 30 TAC§25.6(4) applies.
2-Methylnaphthalene	J	See J-flag discussion above.
2-Methylphenol (o-Cresol)	J	See J-flag discussion above.
Fluorene	J	See J-flag discussion above.
Hexachlorocyclopentadiene (HCCPD)	S1	Spike (MS,MSD) recovery issue. MS & MSD recovery outside acceptance range. LCS recovery OK. Probable matrix interference.
Indene	J	See J-flag discussion above.
Indene	N	NELAC accreditation for this analyte not available from TCEQ. 30 TAC§25.6(4) applies.
Methylchrysene	N	NELAC accreditation for this analyte not available from TCEQ. 30 TAC§25.6(4) applies.
Phenol	J	See J-flag discussion above.

**Client:** Gainco, Inc.  
**Attn:** Paul Supak  
**Address:**

**Phone:**                      **FAX:**

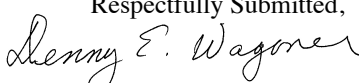
**Report#/Lab ID#:** 352494                      **Report Date:** 05/16/11  
**Project ID:** Falcon Refinery  
**Sample Name:** Tank 27  
**Sample Matrix:** water  
**Date Received:** 05/10/2011                      **Time:** 16:11  
**Date Sampled:** 05/10/2011                      **Time:** 12:00

## REPORT OF ANALYSIS

## QUALITY ASSURANCE DATA <sup>1</sup>

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
A/BN extraction-625/8270	---	---	---	---	05/13/11	3510	---	---	---	---	---
Metals Dig.-Hg	---	---	---	---	05/11/11	7470 & SM3112B	---	---	---	---	---
Metals Dig.-Total	---	---	---	---	05/11/11	200.2 & 3005A	---	---	---	---	---
Arsenic/ICPMS	<0.002	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	J,	0	99.5	98.3	99.6
Barium/ICPMS	0.209	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	1	104.9	106.6	100
Cadmium/ICPMS	<0.001	mg/L	0.001	<0.001	05/13/11	6020A & 200.8	---	0.8	93.9	100.5	92.7
Chromium/ICPMS	<0.002	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	1.5	99.5	98.5	100
Lead/ICPMS	<0.002	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	J,	0.1	87	95.6	92.2
Mercury/CVAA	<0.0002	mg/L	0.0002	<0.0002	05/12/11	7470&SM3112B	---	3.08	90	107	107
Selenium/ICPMS	<0.002	mg/L	0.002	<0.002	05/13/11	6020A & 200.8	---	1.7	106.2	104	106.9
Silver/ICPMS	<0.001	mg/L	0.001	<0.001	05/13/11	6020A & 200.8	---	1	92.7	97.6	92.2
Volatile organics-8260	---	---	---	---	05/12/11	8260b(5030/5035)	---	---	---	---	---
1,1-Dichloroethane	<1	µg/L	1	<1	05/12/11	8260b & 624	---	5.9	136.5	119.2	121.3
1,1-Dichloroethene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	7.3	107.9	94.5	100.3
1,1,1-Trichloroethane	<1	µg/L	1	<1	05/12/11	8260b & 624	C,L,S,	8.2	143.9	127.9	125.8
1,1,1,2-Tetrachloroethane	<1	µg/L	1	<1	05/12/11	8260b & 624	---	1	107.3	101.8	102.7
1,1,2-Trichloroethane	<1	µg/L	1	<1	05/12/11	8260b & 624	---	2.2	124.7	116.1	114.5
1,1,2,2-Tetrachloroethane	<1	µg/L	1	<1	05/12/11	8260b & 624	---	1.6	129.1	128.8	122.8
1,2-Dibromo-3-chloropropane	<2	µg/L	2	<2	05/12/11	8260b & 624	---	2.6	112.3	104.9	106.1
1,2-Dibromoethane (Ethylene dibromide)	<1	µg/L	1	<1	05/12/11	8260b & 624	---	0.5	118.1	112	112.5
1,2-Dichlorobenzene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	1.2	111.4	110.8	110

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results reflect only the sample identified above. The results have been carefully reviewed and to the best of my knowledge, unless otherwise indicated, meet NELAC requirements as described by AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,  
  
D.E. Wagoner, Technical Director (or designee)

1. Quality assurance data for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent difference between duplicate results. 3. Recovery (Recov.) is the percent of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent recovery of analyte. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte detected between the RQL and the MDL. B = Analyte detected in associated method blank (s). C=poor CCV recovery. L=poor LCS recovery. S & S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference. N=not NELACcertified. N1=subcontract result enquire concerning NELAC certification. Solid sample results for all metals, except Mercury, reported on a dry weight basis (DWB)s. All other results for solid samples reported on an as received basis unless specifically identified as DWB.

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 27

**Report#/Lab ID#:** 352494  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**
**QUALITY ASSURANCE DATA 1**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
1,2-Dichloroethane	<1	µg/L	1	<1	05/12/11	8260b & 624	---	0.8	103.3	93.3	90.9
1,2-Dichloropropane	<1	µg/L	1	<1	05/12/11	8260b & 624	C,	2	132.1	120.6	117.1
1,3-Dichlorobenzene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	0.1	109.7	108.2	107.9
1,4-Dichlorobenzene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	1	108.5	106.9	105.3
1,4-Dioxane	<20	µg/L	20	<20	05/12/11	8260b & 624	---	2.5	119.4	105	118.4
2-Butanone (MEK)	<2	µg/L	2	<2	05/12/11	8260b & 624	---	2.6	137.8	115.3	128.2
2-Chloroethyl vinyl ether	<1	µg/L	1	<1	05/12/11	8260b & 624	---	16.2	108.9	93.4	100.4
2-Hexanone	<2	µg/L	2	<2	05/12/11	8260b & 624	---	0.6	115.7	111.4	111.7
4-Methyl-2-pentanone (MIBK)	<2	µg/L	2	<2	05/12/11	8260b & 624	---	0.8	129.4	114.8	119.6
Acetone (2-Propanone)	<10	µg/L	10	<10	05/12/11	8260b & 624	J,	5.5	105.3	92.3	96
Acetonitrile	<20	µg/L	20	<20	05/12/11	8260b & 624	---	1.2	133.3	112.4	118.1
Acrolein	<10	µg/L	10	<10	05/12/11	8260b & 624	---	3.9	123	106.5	107.7
Acrylonitrile	<10	µg/L	10	<10	05/12/11	8260b & 624	---	0.4	139.8	122.9	123.3
Benzene	<1	µg/L	1	<1	05/12/11	8260b & 624	J,	4.5	126.1	114.9	111.1
Bromobenzene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	1	117.2	116	111.7
Bromodichloromethane	<1	µg/L	1	<1	05/12/11	8260b & 624	---	2	110.1	99.8	98.2
Bromoform (Tribromomethane)	<1	µg/L	1	<1	05/12/11	8260b & 624	---	0.9	100.9	95.4	95.4
Bromomethane (Methyl bromide)	<2	µg/L	2	<2	05/12/11	8260b & 624	---	4.7	91.6	80.7	86.8
Carbon disulfide	<2	µg/L	2	<2	05/12/11	8260b & 624	---	7.9	127.6	113.6	128.7
Carbon tetrachloride	<1	µg/L	1	<1	05/12/11	8260b & 624	---	5	97.6	89.7	89.7
Chlorobenzene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	1	113.7	107.7	108.4
Chloroethane	<2	µg/L	2	<2	05/12/11	8260b & 624	---	8.1	106.7	96.2	92.8
Chloroform (Trichloromethane)	<1	µg/L	1	<1	05/12/11	8260b & 624	---	2.2	120.9	107.8	110
Chloromethane (Methyl chloride)	<2	µg/L	2	<2	05/12/11	8260b & 624	---	7.3	102.7	92	94.3
cis-1,2-Dichloroethene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	2.6	130.4	116.9	113.9
cis-1,3-Dichloropropene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	0.8	117.6	108	104.8
Dibromochloromethane	<1	µg/L	1	<1	05/12/11	8260b & 624	---	2.7	107.5	104.3	103.9
Dibromomethane (Methylene bromide)	<1	µg/L	1	<1	05/12/11	8260b & 624	---	2.3	116.5	103.4	101.6
Dichlorodifluoromethane	<1	µg/L	1	<1	05/12/11	8260b & 624	---	11.8	52.2	48.2	45.7
Ethylbenzene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	1	114.6	109.3	109.2
Iodomethane (Methyl iodide)	<2	µg/L	2	<2	05/12/11	8260b & 624	---	4.8	86.2	76	84.2
m,p-Xylenes	<2	µg/L	2	<2	05/12/11	8260b & 624	---	0.9	113	107.6	107.6
Methylene chloride (Dichloromethane)	<2	µg/L	2	<2	05/12/11	8260b & 624	J,	2.5	137.5	113.8	116.4
MTBE	8.43	µg/L	1	<1	05/12/11	8260b & 624	---	4.2	135.2	118.3	113.3

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 27

**Report#/Lab ID#:** 352494  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**
**QUALITY ASSURANCE DATA <sup>1</sup>**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
o-Xylene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	0.7	114.6	107.5	109.5
Styrene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	1.2	116.1	111	110.4
Tetrachloroethene (Perchloroethylene)	<1	µg/L	1	<1	05/12/11	8260b & 624	---	4.1	105.6	99.4	100.1
Toluene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	3.7	120.5	108.7	107.4
trans-1,2-Dichloroethene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	5.3	127	113.8	123.9
trans-1,3-Dichloropropene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	1.7	112.2	108.7	112.2
Trichloroethene	<1	µg/L	1	<1	05/12/11	8260b & 624	---	3.1	111.7	104	100.4
Trichlorofluoromethane	<1	µg/L	1	<1	05/12/11	8260b & 624	---	7.1	99.7	87.2	93.3
Vinyl acetate	<2	µg/L	2	<2	05/12/11	8260b & 624	---	4.3	140.5	119.7	120.1
Vinyl chloride	<1	µg/L	1	<1	05/12/11	8260b & 624	---	11	95.8	85.9	84.6
Extractable organics-625/8270	---	---	---	---	05/13/11	8270c & 625	---	---	---	---	---
1-Methylnaphthalene	<10	µg/L	10	<10	05/13/11	8270c & 625	N,	8	28.8	88.1	45.2
1,2-Diphenylhydrazine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	15.7	55.8	92.5	78.6
1,2,4-Trichlorobenzene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	3.3	21.6	90	37.6
2-Chloronaphthalene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9	29.1	95.2	46.2
2-Chlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	7.8	40.2	93.2	57.1
2-Methylnaphthalene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.8	27.9	90.4	43.3
2-Methylphenol (o-Cresol)	<10	µg/L	10	<10	05/13/11	8270c & 625	---	22.2	46.5	93.9	63.6
2-Nitroaniline	<50	µg/L	50	<50	05/13/11	8270c & 625	---	9.2	52.6	93.9	81.5
2-Nitrophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	5.9	36.6	98	56.1
2,4-Dichlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	6.5	41.4	95.9	65.9
2,4-Dimethylphenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	3.8	48.3	86.8	78.3
2,4-Dinitrophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	18.1	19.8	98.7	34.6
2,4-Dinitrotoluene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.3	52.2	102.9	77.7
2,4,6-Trichlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	10.4	39.4	96.4	56
2,6-Dichlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	3.3	36.6	92.3	52.6
2,6-Dinitrotoluene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	16.2	55.8	97.8	82.3
3-Nitroaniline	<50	µg/L	50	<50	05/13/11	8270c & 625	---	8.7	50.9	102	82.9
3,3'-Dichlorobenzidine	<20	µg/L	20	<20	05/13/11	8270c & 625	---	13.3	56.2	96.6	86.9
3&4 Methylphenol (m&p-Cresol)	<20	µg/L	20	<20	05/13/11	8270c & 625	---	15.8	40.8	96	59.6
4-Bromophenyl phenyl ether	<10	µg/L	10	<10	05/13/11	8270c & 625	---	19.5	52.4	95.6	70.8
4-Chloro-3-methylphenol	<20	µg/L	20	<20	05/13/11	8270c & 625	---	4.1	51.6	92.8	73.9
4-Chloroaniline (p-Chloroaniline)	<20	µg/L	20	<20	05/13/11	8270c & 625	---	15.7	36.3	106.7	77.6

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 27

**Report#/Lab ID#:** 352494  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**
**QUALITY ASSURANCE DATA <sup>1</sup>**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
4-Chlorophenyl phenyl ether	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.2	45.8	96.5	66.6
4-Nitroaniline	<20	µg/L	20	<20	05/13/11	8270c & 625	---	6.7	44.8	97.5	73.3
4-Nitrophenol	<50	µg/L	50	<50	05/13/11	8270c & 625	J,	7.2	12.6	83	16.2
4,6-Dinitro-2-methylphenol	<25	µg/L	25	<25	05/13/11	8270c & 625	---	19.5	35.5	101.9	50.3
7,12-Dimethylbenz[a]anthracene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	14.5	56.9	99.4	84.4
Acenaphthene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	12.8	40.6	94.3	58.1
Acenaphthylene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	8.4	40.9	96.1	61.8
Aniline	<10	µg/L	10	<10	05/13/11	8270c & 625	---	15.2	47.1	92.1	59
Anthracene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	16.1	58.8	93.4	82.7
Benzidine	<40	µg/L	40	<40	05/13/11	8270c & 625	---	14.9	54.8	85.5	93.8
Benzo[a]anthracene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	11	56.4	93.7	84.6
Benzo[a]pyrene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	10.9	57.9	97	86
Benzo[b]fluoranthene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.2	55	97.6	81.8
Benzo[g,h,i]perylene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	12.2	64.6	90.3	101.1
Benzo[j,k]fluoranthene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.9	56.2	94.7	83.4
Benzoic acid	<40	µg/L	40	<40	05/13/11	8270c & 625	---	26.7	1.9	88.3	4
Benzyl alcohol	<20	µg/L	20	<20	05/13/11	8270c & 625	---	19.9	38	96.5	71.7
bis(2-Chloroethoxy)methane	<10	µg/L	10	<10	05/13/11	8270c & 625	---	5	49.2	90.9	80.7
bis(2-Chloroethyl)ether	<10	µg/L	10	<10	05/13/11	8270c & 625	---	6.5	44.7	93.2	66.3
bis(2-chloroisopropyl)ether	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.8	40.2	90.9	61.4
bis(2-Ethylhexyl)phthalate	<10	µg/L	10	<10	05/13/11	8270c & 625	---	14.1	53.2	98.3	83.1
Butyl benzyl phthalate	<10	µg/L	10	<10	05/13/11	8270c & 625	---	6.9	50.9	95.3	83.8
Chrysene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.5	55.6	91.8	86.1
Di-n-butyl phthalate (Dibutylphthalate)	<10	µg/L	10	<10	05/13/11	8270c & 625	---	15.5	54.3	91	80.4
Di-n-octylphthalate (Dioctylphthalate)	<10	µg/L	10	<10	05/13/11	8270c & 625	---	11.9	52.7	101.8	82.1
Dibenz[a,h]acridine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	16.6	59.1	93.3	89.1
Dibenz[a,h]anthracene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13.3	64.2	90.5	95.7
Dibenzofuran	<10	µg/L	10	<10	05/13/11	8270c & 625	---	13	44.2	96	65.2
Diethylphthalate	<10	µg/L	10	<10	05/13/11	8270c & 625	---	15	53.6	96.9	75.5
Dimethylphthalate	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.2	53	94.9	77.6
Fluoranthene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	11.8	57.5	95.1	84.3
Fluorene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.2	49.9	97.1	72.3
Hexachlorobenzene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	12.4	55.9	93.6	75.6
Hexachlorobutadiene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	1.9	19.5	93	31.8



**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 27

**Report#/Lab ID#:** 352494  
**Sample Matrix:** water

**REPORT OF ANALYSIS-cont.**
**QUALITY ASSURANCE DATA <sup>1</sup>**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual. <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Hexachlorocyclopentadiene (HCCPD)	<10	µg/L	10	<10	05/13/11	8270c & 625	S1,M,	0	0	102.8	14.8
Hexachloroethane	<10	µg/L	10	<10	05/13/11	8270c & 625	---	2.9	19.7	94.8	31.4
Indene	<10	µg/L	10	<10	05/13/11	8270c & 625	N,	11.5	34.2	93.3	50.2
Indeno[1,2,3-cd]pyrene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	16.1	61	92.2	89.4
Isophorone	<10	µg/L	10	<10	05/13/11	8270c & 625	---	6.7	57.6	90.4	95.3
Methylchrysene	<10	µg/L	10	<10	05/13/11	8270c & 625	N,	10.2	46.9	91.9	69.2
N-Nitrosodi-n-propylamine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	4.4	43.1	88.7	71.9
N-Nitrosodimethylamine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	5.9	31	94.3	41.5
N-Nitrosodiphenylamine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	14.4	59.5	91.7	85.4
Naphthalene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	5.5	31.7	90.7	49.8
Nitrobenzene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	1.6	44.1	91.2	72.3
Pentachlorophenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.5	33.2	101.3	54.8
Phenanthrene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	12.2	59.8	92.6	86
Phenol	<10	µg/L	10	<10	05/13/11	8270c & 625	---	15.4	17.9	93.1	25
Pyrene	<10	µg/L	10	<10	05/13/11	8270c & 625	---	11.1	58.7	95.5	85.8
Pyridine	<10	µg/L	10	<10	05/13/11	8270c & 625	---	19.5	26.1	94.6	34.1
Quinoline	<10	µg/L	10	<10	05/13/11	8270c & 625	---	9.8	51.2	91.8	79.4

**Client:** Gainco, Inc.  
**Attn:** Paul Supak

**Project ID:** Falcon Refinery  
**Sample Name:** Tank 27

**Report#/Lab ID#:** 352494  
**Sample Matrix:** water

# REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limits	Date Analyzed	Data Qualifiers
1,2-Dichloroethane-d4	8260b & 624	82.8	70-125	05/12/11	---
4-Bromofluorobenzene	8260b & 624	97.8	80-115	05/12/11	---
Toluene-d8	8260b & 624	104.1	78-115	05/12/11	---
2-Fluorobiphenyl	8270c & 625	34.5	10-110	05/13/11	---
2-Fluorophenol	8270c & 625	24	10-110	05/13/11	---
2,4,6-Tribromophenol	8270c & 625	50.3	10-120	05/13/11	---
Nitrobenzene-d5	8270c & 625	37.3	10-110	05/13/11	---
Phenol-d6	8270c & 625	14.8	10-110	05/13/11	---
Terphenyl-d14	8270c & 625	43.2	10-115	05/13/11	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**Exceptions Report (FINAL SECTION / END-OF-REPORT):****Report #/Lab ID#:** 352494 **Matrix:** water**Client:** Gainco, Inc.**Attn:** Paul Supak**Project ID:** Falcon Refinery**Sample Name:** Tank 27

Unless otherwise identified by data qualifier "N" or by an exception report, all reported results represent parameters and tests for which AnalySys maintains NELAC certification; or results provided by a subcontractor with NELAC certification for the test results provided.

**Sample Temperature/Condition:** ≤6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is ≤ 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

**Standard sample acceptability conditions met? : YES**

Sample received in appropriate container(s), at appropriate temperature and pH.

**J flag Discussion:**

A J-flag data qualifier indicates that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

**Comments pertaining to Data Qualifiers and QC data (where applicable):**

Parameter	Qualif.	Comments
Arsenic/ICPMS	J	See J-flag discussion above.
Lead/ICPMS	J	See J-flag discussion above.
1,1,1-Trichloroethane	L	Lab control sample (LCS or spiked blank). LCS recov-high (high bias). Sample result < MDL. No impact.
1,1,1-Trichloroethane	C	Cont. Calib. Verification (CCV). CCV recov-high (high bias). Sample result < MDL. No impact.
1,1,1-Trichloroethane	S	Spike (MS,MSD,PDS) recovery issue. MS, MSD & PDS recovery outside acceptance range. LCS fails or not available. Probable sample impact.
1,2-Dichloropropane	C	Cont. Calib. Verification (CCV). CCV recov-high (high bias). Sample result < MDL. No impact.
Acetone (2-Propanone)	J	See J-flag discussion above.
Benzene	J	See J-flag discussion above.
Methylene chloride (Dichloromethane)	J	See J-flag discussion above.
1-Methylnaphthalene	N	NELAC accreditation for this analyte not available from TCEQ. 30 TAC§25.6(4) applies.
4-Nitrophenol	J	See J-flag discussion above.
Hexachlorocyclopentadiene (HCCPD)	S1	Spike (MS,MSD) recovery issue. MS & MSD recovery outside acceptance range. LCS recovery OK. Probable matrix interference.
Indene	N	NELAC accreditation for this analyte not available from TCEQ. 30 TAC§25.6(4) applies.
Methylchrysene	N	NELAC accreditation for this analyte not available from TCEQ. 30 TAC§25.6(4) applies.

**Send Reports To:**

**ANALYSIS**  
INC.

2209 N. Padre Island Drive, Suite K  
Corpus Christi, TX 78408  
Ph (361) 289-6384 • Fax (361) 289-0875

**Bill To (if different):**

Company Name SAME  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
ATTN: \_\_\_\_\_  
Phone \_\_\_\_\_ Fax \_\_\_\_\_

Samples/projects intended for TCEQ-TRRP completion require special handling, QC requirements and pricing. To Be successfully completed such projects should be identified and discussed prior to receipt and **MUST BE IDENTIFIED** on this Chain-of-Custody under "special instructions".

No. of Containers and  
Preservative  
(TRRP-13 Mandatory)

### Matrix

Analyze For

CH 7C

[illegible]

Special Instructions (such as special QC requirements, lists, methods, etc...)
--

Email results to Paul Supak at [psupak@gaincoinc.com](mailto:psupak@gaincoinc.com)

24 HR TAT

Temperature  
upon receipt  
(Consistent with  
NELAC sec.  
5.11) ( $>0-6^{\circ}\text{C}$ )

1.70C

(1) Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reporting limits (MDL/PQL). For GC/MS volatiles and extractables, unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain-of-custody, ASI will default to Priority Pollutants or ASI's HSL list at ASI's option. Specific compound lists must be supplied for all GC procedures.

Sample Relinquished By				Sample Received By				5/11/2011	
Name	Affiliation	Date	Time	Name	Affiliation	Date	Time	YES	X
Paul Supel	GAINCO	5/10/11	16:11	C. Adams	ASI	5/10/11	16:11	NO	

[Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s standard terms.]



PRI PPD

10MAY11 05:45P

\*\* LABEL \*\*

Schd: VLP 0834

GLI 3061984112

Pcs: 3 of 5

AUSTIN, TX



From: ANALYSYS INC AUSTIN TX  
512-385-5886

RECV: ANALYSYS

3512 MONTOPOLIS DR

2.4

Manual Wght:

227.5

Tariff Wght:

230.0

AUSTIN, TX 78751

Phone: 222-222-2222

PO/Ref #:

Priority

Agency Phone: (512) 454-9686

WWW.SHIPGREYHOUND.COM

☐ RUSH <sup>13</sup>5-12-11 Date Due  
<sub>23</sub>

ASI-0012

Rev. 2

Prepared: 07/09/2009

Effective: 07/20/2009

### ASI Sample Evaluation and Comment Tracking

Sample #'s: 352492-494 Client: Grainco Date: 5/10/11

ASI Proj #: 3269S Proj. Name: Falcon Refinery # of C-O-C's: 1

In compliance with the NELAC standard, ASI is notifying you that the **SAMPLES** identified here and on the attached Chain-of-Custody were received by AnalySys, Inc. (ASI) with the following **INTEGRITY ISSUES** (any NO responses indicated below). In order to assure that ASI will meet your testing needs in a timely manner, **ASI WILL PROCEED WITH THE TESTING** of these samples as directed and comment on the final reports per NELAC requirements. **PLEASE NOTIFY ASI IMMEDIATELY** if you wish to **SUSPEND** analysis, **MAKE ANY CHANGES** to the requested testing services or if the action indicated **IS INCORRECT**.

### Sample Integrity Evaluation on Receipt

	Y	N	N/A			Y	N	N/A	
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	C-O-C Received w/samples?	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample Preservation-Temp OK?
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	C-O-C complete with adequate info?	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Samples received on ice?
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	C-O-C and samples match (# and descrip.)?	8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample Preservation-pH OK?
4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Custody Seals (if present) intact?	9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample Containers Appropriate
5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample Integrity OK?	10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	VOA headspace OK?
11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dissolved metal samples field filtered and preserved?					

Comment: \_\_\_\_\_

- ☐ ASI Personnel assisted with completion of the C-O-C (in-person or by phone/e-mail).  
☐ Additional information supplied w/C-O-C by client.  
☐ Samples submitted significantly after (>2 days) sampling, potentially affecting ability to meet hold times.

Comment: \_\_\_\_\_

### Project Management Observations or Discrepancies

- ☐ Insufficient information supplied to determine target analytes required. ASI standard lists will be used.  
☐ Special report formats **REQUIRED**. ☐ TRRP ☐ Landfill ☐ Other  
☐ Historical project data available for review.  
☐ Target analyte list attached.

Comment: \_\_\_\_\_

Form Sent to Client on: \_\_\_\_\_ at \_\_\_\_\_ by ☐ FAX ☐ E-Mail ☐ mail  
Client Response Recd.: \_\_\_\_\_ at \_\_\_\_\_ by ☐ FAX ☐ E-Mail ☐ VERBAL

Client Response: ☐ Proceed w/analysis ☐ Resample and re-submit

Authorized by (Client Signature): \_\_\_\_\_ Date \_\_\_\_\_



[illegible]

## **APPENDIX B**

# **Removal Action Work Plan Addendum No. 3**

## **Falcon Refinery Superfund Site Ingleside San Patricio County, Texas TXD 086 278 058**

**Prepared for**

**National Oil Recovery Corporation  
3717 Bowne Street  
Flushing, NY 11354**

**Prepared by:**



**TRC Environmental Corporation  
505 East Huntland Drive, Suite 250  
Austin, Texas 78752**

**May 2011**

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### FIGURES

Figure 1      Area Map

Figure 2      Above Ground Storage Tank Map

## 1. INTRODUCTION

This report describes past activities performed by National Oil Recovery Corporation (NORCO) as well as upcoming activities associated with the EPA approved Removal Action Work Plan, which was directed by the *Administrative Order on Consent (AOC)*, *CERCLA Docket No 06-04-04* at the Falcon Refinery in Ingleside, Texas.

Provided below are excerpts from the AOC that are pertinent to the scope of work. Each of the required items in the section termed “The Work” will be described in terms of work already completed and work yet to be completed.

Actions associated with the Removal Action were performed under the EPA approved Removal Action Work Plan, dated July 20, 2004.

### ***WORK TO BE PERFORMED***

*The Respondent shall perform, at a minimum, all actions necessary to implement the Order of Work. The actions to be implemented generally include, but are not limited to, the following:*

#### ***The Work***

*The intent of this action is to remove and dispose of source materials from tanks and other miscellaneous containers, equipment, piping and buildings. This also includes the removal of any source materials in piping associated with transfer or materials to the facility docks or former facility docks. As a result, it may be necessary to demolish or otherwise remove some tanks, piping, equipment, and buildings in order to effectuate this activity. This action may also include the consolidation of materials in onsite tankage for future disposal. If the Respondent elects to consolidate and temporarily store these materials, Respondent must comply with all applicable laws including storage and spill prevention regulations.*

*The work includes:*

- *Asbestos Inspection and Abatement: The Respondent shall comply with applicable law(s) to address any asbestos and coordinate its handling appropriately with any demolition activities. Therefore, it will be necessary for the Respondent to conduct an asbestos inspection and make appropriate notifications for the conduct of such demolition and asbestos abatement activities as required by applicable law(s).*
- *Assessment and Removal of Hazardous Substances, or Pollutants or Contaminants: The Respondent shall conduct tests and properly classify the wastes for appropriate disposal or recycling.*
- *Decontamination of Containers, Equipment, Piping, and Buildings: The Respondent shall decontaminate all containers, equipment, piping, and buildings to the extent necessary for the purpose of recycling, reuse, or disposal.*

- *Removal of Containers, Equipment, Piping, and other Contaminated Items: The Respondent shall recycle or dispose of containers, equipment, piping, and other potentially contaminated items in accordance with applicable law(s). The metal debris associated with the removal of the containers, equipment, piping, and other items should be recycled to the extent practical.*
- *Consolidation, Removal and Disposal of Grossly Contaminated Soil: The Respondent shall consolidate and then treat or dispose of visibly contaminated surface soils identified during the conduct or resulting from the conduct of this action.*

## **2. COMPLETED ACTIVITIES**

Described in this section are the completed activities associated with “The Work”.

### **2.1. Asbestos Inspection and Abatement**

Asbestos sampling, which was performed during August 2004 and reported in the September 2004 Monthly Progress Report, indicated that minimal asbestos was present at the site. Detected asbestos containing materials (ACM) were limited to gaskets associated with various pipeline connections. No friable asbestos materials were present.

### **2.2. Assessment and Removal of Hazardous Substances, or Pollutants or Contaminants**

During September 2004 the contents of all the above ground storage tanks (AST) were gauged to determine the volume of waste and sampled to characterize the waste. An estimated 6.8 million gallons of liquid waste that required disposal was measured. In addition to the liquid waste 62,000 gallons of sludge was measured.

Analytical sampling indicated varied waste streams and compatibility testing was performed of the waste to ensure safe disposal.

Based on the characteristics of the waste deep well injection at the Texas Molecular facility in Corpus Christi was selected. Three tanker trucks a day made three trips each from the refinery to the Texas Molecular facility carrying liquid waste, which resulted in the disposal of 7,774,721 gallons of waste. The waste disposal volume was higher than the estimated amount due to rainfall entering the tanks during disposal operations.

### **2.3. Decontamination and Removal of Containers, Equipment, Piping, and Buildings**

From October 2004 through February 2005 the onsite buildings, abandoned drums and equipment were described, decontaminated, characterized and properly disposed. Results included the recycling of 67,840 pounds of metal, 10 fire extinguishers, and 403 gallons of oil and filters.

Items that couldn't be recycled were disposed, which resulted in the disposal of 16,651 gallons of waste oil.

When oil was discovered leaking in the wetlands adjacent to the refinery, ten pipelines were excavated, cut at five locations and jetted clean prior to having steel caps welded on the pipelines.



## **2.1.Consolidation, Removal and Disposal of Grossly Contaminated Soil**

During September 2004 measurements of grossly contaminated soil based on the surface extent and depth of visibly impacted soil was estimated to be approximately 6,000 cubic yards. Based on the amount of grossly contaminated soil NORCO proposed, to the EPA, the possible construction of bioremediation cells to treat the soil on site rather than disposing of the soil at a hazardous waste facility.

During December 2004 and February 2005, 55 cubic yards of grossly contaminated soil was disposed at the US Ecology Texas Facility in Robstown, with EPA's approval.

The remainder of the grossly contaminated soil cannot be excavated until the sludge is removed from the above ground storage tanks.

### **3. UPCOMING ACTIVITIES**

Described in this section are the upcoming activities associated with “The Work”.

#### **3.1. Asbestos Inspection and Abatement**

Based on the results of the asbestos sampling performed during 2004, which indicated no friable asbestos, no asbestos inspection or abatement is anticipated. If any asbestos containing materials (ACM) are detected or if a material appears to be ACM, testing will be performed and appropriate measures will be taken.

#### **3.2. Assessment and Removal of Hazardous Substances, or Pollutants or Contaminants**

As of September 2009 all liquid waste was removed from all of the above ground storage tanks. However, sludge was measured and remained in Tanks 7, 10, 26, 27 and 30.

Upon approval of the commencement of work by NORCO the initial action will be the measurement of the contents of all tanks and vessels. Tanks leased to Superior Crude Gathering (Superior), which includes Tanks 13, 15 and 16 will not be inspected as they are either in use or are in the process of being repaired. An additional unnamed and unnumbered tank, noted by the EPA as leaking during an inspection will also be evaluated.

After the measurement of the sludge NORCO anticipates mobilizing a centrifuge to separate liquid waste from solid waste. The last estimate of the volume of sludge indicated that there would be approximately 180 tons of solid waste and 15,000 gallons of liquid waste that will need disposal.

When the materials are separated they will be stored in appropriate containers (frac tanks or lined roll off boxes) pending characterization and disposal. The EPA will be notified of any disposal plans and no disposal will take place prior to EPA approval.

#### **3.3. Decontamination and Removal of Containers, Equipment, Piping, and Buildings**

When the contents of the tanks are removed a determination will be made about the usability of each tank. If a tank is to be used in the future the inside of the tank will be either steam cleaned or sand blasted and a full American Petroleum Institute (API) 653 internal/external (out-of-service) inspection will be conducted by a properly certified API 653 tank inspector.

For tanks that remain in service repairs will begin immediately to prevent the collection of rainwater in tanks due to leaking roofs.

If a tank is to be razed then the tank will still be cleaned to the level necessary for disposal. The EPA will be notified of the future of each tank and will be allowed to observe the cleaning of the tanks.

Prior to any tank parts leaving the site the EPA will be notified.

Currently there are no plans to remove any of the former refining equipment or to construct any new refining equipment. Prior to any construction the EPA will be notified. Any removed metal will be recycled.

### **3.4. Consolidation, Removal and Disposal of Grossly Contaminated Soil**

During a site inspection in March 2011 there was no grossly contaminated soil observed at the main portion of the refinery or around the storage tanks. The inspection did not include the north property as a result there may be grossly contaminated soil on that property.

On February 9, 2010 Superior, which leases several of the above ground tanks at the site, had a release from Tank 13. Approximately 22,000 barrels of crude oil was released from the tank and onto the site. Remediation efforts, using pumps and vacuum trucks were successful in the recovery of much of the crude oil.

Superior used heavy equipment to scrape off the impacted soil (grossly contaminated), which is still stockpiled at the site pending regulatory approval for disposal. The results were described in the *Site Investigation Report and Remediation Plan, Superior Crude Gathering, Inc, Crude Oil Spill, Ingleside, Texas* dated July 23, 2010 by Pastor, Behling & Wheeler.

Upon approval of the commencement of work by NORCO an assessment will be made of the volume of grossly contaminated soil and the EPA will be notified. Based on the volume of soil NORCO will either propose the construction of a bioremediation cell to treat the soil or will propose disposal at an appropriate facility. No soil will be moved without EPA approval.

After each tank is cleaned as noted in section 3.3 a determination will be made about the re-use of the tank. If the tank is removed then the soil underneath the tank will be checked for visual contamination. If the tank is not taken out of service then the bottom of the tank will be thoroughly inspected to insure that there are no cracks, holes or areas of weakness that could have resulted in the release of contamination below the tank. If inspection reveals damage to the tank bottom then the tank bottom will be removed and any visually contaminated soil will be removed prior to the repair or replacement of the tank bottom.

Any excavated grossly contaminated soil will be replaced by clean fill brought to the site.

#### **4. SCHEDULE**

NORCO will begin work when notified by the EPA that actions may commence. The initial tank inspection is expected to take one week to determine the volume of waste in the tanks. Once the volume of waste is determined equipment likely including a centrifuge, frac tanks, pumps, vacuum trucks and associated equipment will be mobilized to the site to begin the removal of the contents of the tanks that contain waste.

As noted previously when the tanks are emptied the tanks will be cleaned to the appropriate level and any grossly contaminated soil around the tanks or around the site will be excavated and either treated on site or disposed of properly.

All work associated with the Removal Action will be completed by December 31, 2011 and all tankage will be cleaned and gas freed no later than August 1, 2011.